

REMARKS

The Office action dated December 20, 2005, has been carefully reviewed.

Applicants affirm the provisional election made on September 20, 2005, to prosecute the invention of Group I, Claims 1-7 .

The disclosure is objected to because "NVH" requires a definition. Paragraph [0003] has been amended to specify that NVH means noise, vibration and harshness.

Claims 1-7 stand rejected under 35 U.S.C. 112, first paragraph. Claim 1 has been amended such that the claimed method now recites (1) that the method is applicable to a catalytic converter heat shield, and (2) a step of thermal spraying said heat shield. These amendments correct the bases for this rejection.

Claims 4-5 stand rejected under 35 U.S.C., first paragraph, as failing to comply with the enablement requirement. Claims 4 and 5 are amended to clarify that the stated range is with reference to weight. The abscissa of the phase diagram for the Al-Si system shown in Figure 2 is referenced to weight.

Claims 1 and 4-7 stand rejected under 35 U.S.C. 103(a) as unpatentable over Smith (U.S. Patent 2,355,568), Hartsock et al. (U.S. Patent 5,530,213), and Masumoto et al (U.S. Patent 4,859,252). Smith discloses a method for applying insulation to the center of a metal panel. Hartsock discloses the application of a layer of material less dense than stainless steel on the outer wall of a manifold. Masumoto discloses an alloy of silicon and aluminum having high damping characteristics for preventing vibration and noise.

Claim 1 has been amended such that the claimed method includes securing an uncoated heat shield to a catalytic converter in the exhaust system of an automotive vehicle, and then running the engine of the vehicle to locate the regions on the uncoated heat shield where the levels of vibration are highest. None of the prior art references teaches nor suggests these additional steps of the method cited in Claim 1.

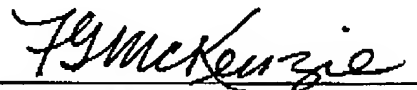
Claims 2 and 3 stand rejected under 35 U.S.C. 103(a) as unpatentable over the admitted state of the art in view of Smith, Hartsock and Masumoto as applied to

Claims 1 and 4-7 above, and further in view of the '459 patent of Kim. Kim discloses use of computer aided engineering when a wheel housing cover to determine a vibration level that occurs in a range of frequencies. Computer engineering generally involves preparing a finite element, mathematical model of the component being investigated. The component model includes the dimensions, physical properties, nature of the structural interconnections among the elements, loading, and boundary conditions at which the component is supported. The method claimed in this application for mounting a heat shield on the catalytic converter and determining the locations of maximum vibration on the heat shields in the operating environment of the heat shield is neither disclosed nor suggested by any of the prior art reference.

Claim 3 has been canceled. Claim 13, a new claim, recites that the location of high level of vibration is determined by measuring the level of vibration on the heat shield in its operating environment using a sound pressure recording. Support for claim 13 is present in the specification at paragraph [0027].

In view of the foregoing amendment and remarks, claims 1, 2, 4-7 and 13 are now in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



Frank G. McKenzie
Attorney for Applicant(s)
Reg. No. 29,242

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MacMillan, Sobanski & Todd, LLC
One Maritime Plaza, Fourth Floor
720 Water Street
Toledo, Ohio 43604
(734) 542-0900
(734) 542-9569 (fax)